Countermeasure Information										Feedback	
Source -LRSM = Local Road Safey Manual -NCHRP = National Cooperative Highway Research Program	**Countermeasure Name**	**Location** -UI = unsignalized intersection -SI = signalized intersection -R = roadway segments -all = all of the above	**Collision Type(s)** **(**if documented)	**CRF** (if available)	**Expected Life** (if available)	**Caltrans HSIP funding** The maximum HSIP reimbusement ratio for HSIP Cycle 11 call-for projects	**Cost (if available)** $ = > $50,000 $$ = $50,000 - $200,000 $$$ = > $200,000	**Systemic?** Countermeasures that can be applied across an entire corridor or network	**Quick Build?** Y or N	**Has your agency implemented this countermeasure?** (Click in the cell and choose an option from the drop down menu)	**Please use this column to provide any context for your response**
LRSM	Lighting	all	Nighttime	0.4	20	90%		Medium	N		
LRSM	Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number	SI	Signalized Local/Arterial Intersections	0.15	10	90%	$	Very High	N		
LRSM	Install left-turn lane and add turn phase	SI	Signalized Local/Arterial Intersections	0.55	20	90%	$ - $$$	Low	N		
LRSM	Convert signal to mast arm (from pedestal-mounted)	SI	Signalized Local/Arterial Intersections	0.3	20	90%	$ - $$$	Medium	N		
LRSM	Install raised median on approaches	SI	Signalized Local/Arterial Intersections	0.25	20	90%	$ - $$$	Medium	N		
LRSM	Create directional median openings to allow (and restrict) left-turns and U-turns (signalized intersection)	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	0.5	20	90%	$ - $$	Medium	N		
LRSM	Install raised pavement markers and striping	SI	Wet, Night, all	0.1	10	90%	$	High	Y		
LRSM	Install flashing beacons as advance warning (S.I.)	SI	read-end, broadside	0.3	10	90%	$ - $$	Medium	N		
Other	No Right Turn on Red (RTOR)	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	N/A		N/A	$	Medium	Y		
NCHRP 926	Centerline Hardening or Continuous Raised Median	SI	All crashes	0.46	N/A	N/A	$	Medium	Y		
LRSM	Convert intersection to roundabout (from signal)	SI	Signalized Local/Arterial Intersections	Varies	20	90%	$ - $$$	Low	N		
LRSM	Install pedestrian countdown signal heads	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	0.25	20	90%	$	High	N		
LRSM	Install pedestrian crossing	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	0.25	20	90%	$	High	Y		
LRSM	Install pedestrian scramble	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	0.4	20	90%	$	High	N		
LRSM	Install advance stop bar before crosswalk (Bicycle Box)	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	0.15	10	90%	$	High	Y		
LRSM	Modify signal phasing to implement a Leading Pedestrian Interval (LPI)	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	0.6	10	90%	$	High	Y		
Other	Install painted safety zone	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	N/A	N/A	N/A	$	High	Y		
NCHRP 926	Install Protected Intersection Elements	SI	Pedestrian Crashes, Signalized Local/Arterial Intersections	N/A	N/A	N/A	$ - $$$	Low	N		
LRSM	Convert to all-way STOP control (from 2-way or Yield control)	UI	All	0.5	10	90%	$	Low	Y		
LRSM	Install signals	UI	All	0.3	20	90%	$$$	Low	N		
LRSM	Convert intersection to roundabout (from all way stop)	UI	All	Varies	20	90%	$$$	Low	N		
LRSM	Convert intersection to roundabout (from stop or yield control on minor road)	UI	All	Varies	20	90%	$$$	Low	N		
LRSM	Convert intersection to mini-roundabout	UI	All	0.3	20	90%	$$	Low	N		
LRSM	Create directional median openings to allow (and restrict) left-turns and u-turns (unsignalized intersections)	UI	All	0.5	20	90%	$ - $$	Medium	N		
LRSM	Install raised medians (refuge islands)	UI	Pedestrian and Bicyclists	0.45	20	90%	$	Medium	N		
LRSM	Install pedestrian crossings (signs and markings only)	UI	Pedestrian and Bicyclists	0.25	10	90%	$ - $$$	High	Y		
LRSM	Install pedestrian crossings (with enhanced safety features)	UI	Pedestrian and Bicyclists	0.35	20	90%	$ - $$$	Medium	Y		
LRSM	Install/upgrade larger or additional stop signs or other intersection warning or regulatory signs	UI	Rear-end, right-angle, or turning crashes related to lack of driver awareness	0.15	10	90%	$	High	Y		
LRSM	Upgrade intersection pavement markings	UI	Rear-end, right-angle, or turning crashes related to lack of driver awareness	0.25	10	90%	$	High	Y		
LRSM	Install flashing beacons at stop-controlled intersection	UI	Broadside, Rear-end	0.15	10	90%	$$$	High	N		
LRSM	Install Pedestrian Signal or Pedestrian Hybrid Beacon	UI	Pedestrian and Bicycle	0.3	10	90%	$$$	High	N		
LRSM	Install transverse rumble strips on approaches	UI	All	0.2	10	90%	$	High	Y		
LRSM	Install splitter islands on the minor road approaches	UI	All	0.4	20	90%	$	Medium	N		
LRSM	Road diet (Reduce travel lanes from 4 to 3 and add a two way left-turn and bike lanes)	R	All	0.35	20	90%	$	Medium	Y		
Other	Corridor access management	R		Varies.	N/A	N/A	$ - $$$		Low	N	
LRSM	Install edgeline rumble strips/stripes	R	All	0.15	10	90%	$-$$$	High	Y		
LRSM	Install separated bike lanes	R	Pedestrian and Bicyclists	0.45	20	90%	$ - $$	High	Y		
LRSM	Install/upgrade pedestrian crossing (with enhanced safety features)	R	Pedestrian and Bicyclists	0.35	20	90%	$$-$$$	Medium	N		
LRSM	Install raised pedestrian crossing	R	Pedestrian and Bicyclists	0.35	20	90%	$	Medium	Y		
LRSM	Remove or relocate fixed objects outside of Clear Recovery Zone	R	Hit Object	0.35	20	90%	$-$$	High	Y		
LRSM	Install delineators, reflectors and/or object marker	R	All	0.15	10	90%	$	High	Y		
LRSM	Install/upgrade signs with new fluorescent sheeting (regulatory or warning)	R	All	0.15	10	90%	$	High	N		
LRSM	Install dynamic/variable speed warning signs	R	Driver Behavior	0.3	10	90%	$	High	Y		
Other	Extend pedestrian crossing time	SI	Pedestrian	N/A	N/A	N/A	$	High	N		
Other	Pedestrian Phase Recall	SI	Pedestrian	N/A	N/A	N/A	$	High	N		
Other	Extend green time for bikes	SI	Bikes	N/A	N/A	N/A	$	High	N		
Other	Extend Yellow and All Red Time	SI	All	N/A	N/A	N/A	$	High	N		
Other	Lane Narrowing	R	All	N/A	N/A	N/A	$-$$	Low	Y		
Other	Bicycle Crossing (Solid Green Paint)	SI	Bikes	N/A	N/A	N/A	$	Medium	Y		
Other	Bicycle Signal/Exclusive Bike Phase	SI	Bikes	N/A	N/A	N/A	$-$$	Low	N		
Other	Curb Extensions	UI	All	N/A	N/A	N/A	$-$$	Low	Y		
Other	ADA-compliant directional curb ramps and audible push buttoms	SI	Pedestrian	N/A	N/A	N/A	$-$$	Low	N		
NCHRP 926	Curb Radius Reduction	SI,UI	all	N/A	N/A	N/A	$$	Low	Y		
NCHRP 613	Splitter Islands	UI,SI	all	N/A	N/A	N/A	$$	Medium	Y		

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NCHRP 613	Approach Curvature	UI,SI	all	N/A	N/A	N/A	$$$	Low	N		
NCHRP 613	Roadside Design Features	all	all	N/A	N/A	N/A	$-$$$	Low	N		